ATX-007CP4DV17RCE

Appl. No.: 09/513,997

Amdt. Dated: July 16, 2004

Reply to Office Action of: January 16, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

applications:

**Listing of Claims:** 

Please cancel claim 119.

1-107. (Previously cancelled)

108. (Currently amended) A method for over-expressing a desired protein encoded by

a desired endogenous gene or portion thereof in a cell introduced into an a non-human animal,

said method comprising:

(a) introducing a vector comprising a transcriptional regulatory sequence into

one or more cells in vitro;

(b) maintaining the one or more cells in (a) containing the introduced vector

under conditions appropriate for non-homologous recombination of the vector with the genome

of the one or more cells thereby producing one or more non-homologously recombinant cells,

wherein the transcriptional regulatory sequence on the vector is operably linked to an

endogenous gene thereby over-expressing the endogenous gene and protein encoded by said

endogenous gene;

(c)

screening said one or more cells from step (b) for expression of a desired

endogenous gene;

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(d) isolating and cloning said cell from step (c) expressing said desired

endogenous gene; and

(e) introducing said non-homologously recombinant cell of step (d) into an a

non-human animal and maintaining the non-homologously recombinant cell in said

animal under conditions appropriate for over-expression of said desired protein encoded

by said desired endogenous eellular gene or portion thereof.

109. (Previously added) The method of claim 108, wherein said transcriptional

regulatory sequence is a promoter.

110. (Previously added) The method of claim 109, wherein said promoter is a viral

promoter.

111. (Previously added) The method of claim 110, wherein said viral promoter is

the cytomegalovirus immediate early promoter.

112. (Previously added) The method of claim 109, wherein said promoter is a non-

viral promoter.

113. (Previously added) The method of claim 109, wherein said promoter is

inducible.

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114. (Previously added) The method of claim 108, further comprising introducing double strand breaks into the genomic DNA of said cell prior to or simultaneously with integration of said vector.

115. (Previously added) The method of claim 108, wherein said vector is linear.

116. (Currently amended) The method of claim 108, wherein said endogenous eellular gene encodes a transmembrane protein.

117. (Previously added) The method of claim 108, wherein said promoter is operably linked to a splice donor sequence on the vector and wherein the splice donor is spliced to a splice acceptor in the endogenous gene that that encodes the desired protein.

118. (Previously added) The method of claim 108, wherein said animal is a mammal.

119. (Currently cancelled) The method of claim 118, wherein said mammal is a human.